

# NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

## Briefing paper for methods review workshop on equity

The briefing paper is written by members of the Institute's staff. It is intended to provide a brief summary of the issues that are proposed for discussion at a workshop to inform an update to the Institute's Guide to Methods of Technology Appraisal. It is not intended to reflect a comprehensive or systematic review of the literature. The views presented in this paper are those of the authors and do not reflect the views of the Institute.

The briefing paper is circulated to people attending that workshop. It will also be circulated to the members of the Method's Review Working Party, the group responsible for updating the guide.

For further details regarding the update of the Guide to the Methods of Technology Appraisal please visit the NICE website at <http://www.nice.org.uk/aboutnice/howwework/devnicetech/technologyappraisalprocessguides/GuideToMethodsTA201112.jsp>

### **1 Review of the 'Guide to Methods of Technology Appraisal'**

The Institute is reviewing the 'Guide to the methods of technology appraisal', which underpins the technology appraisal programme.

The original Methods Guide was published in February 2001, and a revised version was published in 2007. The Methods Guide provides an overview of the principles and methods used by the Institute in assessing health technologies. It is a guide for all organisations considering submitting evidence to the technology appraisal programme and describes appraisal methodology.

The current 'Guide to methods of technology appraisal' is available from the NICE website at

<http://www.nice.org.uk/aboutnice/howwework/devnicetech/technologyappraisalprocessguides/guidetothemethodsoftechnologyappraisal.jsp>

The review of the Methods Guide will take place between October 2011 and April 2012. As part of the process, a number of workshops will be held to help identify those parts of the Guide that require updating. These workshops will involve a range of stakeholders, including methods experts, patient representatives, industry representatives, NHS staff and NICE technology appraisal committee members.

A summary of the discussion at the workshop will be provided to the Methods Review Working Party, the group responsible for preparing the draft update of the Methods Guide. Further details of the process and timelines of the review process are available from the NICE website.

The revised draft of the Methods Guide will be available for a 3-month public consultation, expected to begin in June 2011. We encourage all interested parties to take part in this consultation.

## 2 Background

The Technology Appraisals Methods Guide contains the following relating to equity.

*“1.4.3 The Institute is committed to promoting equality, eliminating unlawful discrimination and actively considering the implications of its guidance for human rights. The Institute will take into account relevant provisions of legislation on human rights, discrimination and equality. ‘NICE’s equality scheme and action plan 2007–2010’ describes how the Institute meets these commitments and obligations.”*

*“2.31 During the consultation on draft scopes in Technology Appraisals interested parties are asked for their views on an appropriate remit for the appraisal and important issues to be considered. This consultation process is important to define the relevant issues to be considered and, in*

*particular, to: [...] identify any equality or diversity issues that need to be taken into consideration. “*

*“3.4.4 The Institute considers equity in terms of how the effects of a health technology may deliver differential benefits across the population. Evidence relevant to equity considerations may also take a variety of forms and come from different sources. These may include general-population-generated utility weightings applied in health economic analyses, societal values elicited through social survey and other methods, research into technology uptake in population groups, evidence on differential treatment effects in population groups, and epidemiological evidence on risks or incidence of the condition in population groups.”*

*“3.4.5 The Institute is committed to promoting equality and eliminating unlawful discrimination, including paying particular attention to groups protected by equalities legislation. The scoping process is designed to identify groups who are relevant to the appraisal and reflect the diversity of the population. The Institute consults on whether there are any issues relevant to equalities within the scope of the appraisal, or if there is information that could be included in the evidence presented to the Appraisal Committee to enable them to take account of equalities issues when developing guidance.”*

*“5.10.10 The Appraisal Committee will pay particular attention to its obligations with respect to legislation on human rights, discrimination and equality when considering subgroups.”*

*“6.1.3 When formulating its recommendations to the Institute, the Appraisal Committee has discretion to consider those factors it believes are most appropriate to each appraisal. In doing so, the Appraisal Committee has regard to the provisions of NICE’s Establishment Orders and legislation on human rights, discrimination and equality. In undertaking appraisals of healthcare technologies, the Institute is expected to take into account Directions from the Secretary of State for Health [...] as follows [...]*

6.2.6 ... [T]he, the Chair ensures that the Committee considers: [...] the relevant legislation on human rights, discrimination and equality [...]

6.2.20 The Committee will take into account how its judgements have a bearing on distributive justice or legal requirements in relation to human rights, discrimination and equality. Such characteristics include, but are not confined to: age; sex/gender or sexual orientation; people's income, social class or position in life; race or ethnicity; disability; and conditions that are or may be, in whole or in part, self-inflicted or are associated with social stigma."

The purpose of this paper is to focus on equity and health from a public health perspective in order to identify a number of core considerations for discussion at the workshop.

### **3 Proposed issues for discussion**

After consideration of the developments in this methodological area, the current Methods Guide and the requirements of the Institute's Technology Appraisal Programme, it is proposed that the following key areas are discussed at the workshop.

#### **3.1 Definition**

Consistent terminology in the arena of equity has been found to be helpful by the World Health Organisation (WHO) which has had a long standing interest in the matter. Recently the World Health Organisation's Commission on the Social Determinants of Health (WHO, 2008) used definitions arising from the work of Whitehead (Whitehead, 1992; 2006; Whitehead and Dahlgren 2006) and Solar and Irwin (2007; 2010). The critical definitions are:

- Health equity – the absence of unfair and avoidable or remediable differences in health among social groups (Solar and Irwin, 2010:14).
- Health inequity – unfair and avoidable or remediable differences.

- Health Inequality – health differences which are not avoidable or are not the consequence of human actions and activities and are based on genetic or constitutional individual differences, age or biological sex. These are sometimes also referred to as variations (Kelly et al 2007).

It is important to note that the difference here between inequity and inequality is not used universally and many writers and commentators use the two terms as synonyms. Also the distinction between individual differences which are based on human biology and differences arising from interaction between the organism and some man made hazard externally is in reality a difficult one to draw in anything other than an analytic sense. Empirically the divide is much fuzzier than these definitions suggest. However as a way of finding some clarity the distinction is helpful.

The gist of the argument about equity and inequity is that they are not the products of nature they are the products human actions and are socially, economically or politically produced and therefore theoretically, at least, modifiable (Whitehead and Dahlgren, 2006:2; Kelly and Doohan, 2011).

The questions raised by the definitional work of WHO for the workshop are

- (i) Are NICE's definitions clear?
- (ii) Do they correspond to those used by WHO?
- (iii) What are the bases of the definitions used in the legislation?
- (iv) Are any scientific problems generated by the appeals to principles such as unfairness, social justice and human rights?

### ***3.2 Three characteristics of health inequities***

It has been argued that there are three characteristics of health inequities: patterning, causation and unfairness (Whitehead and Dahlgren, 2006).

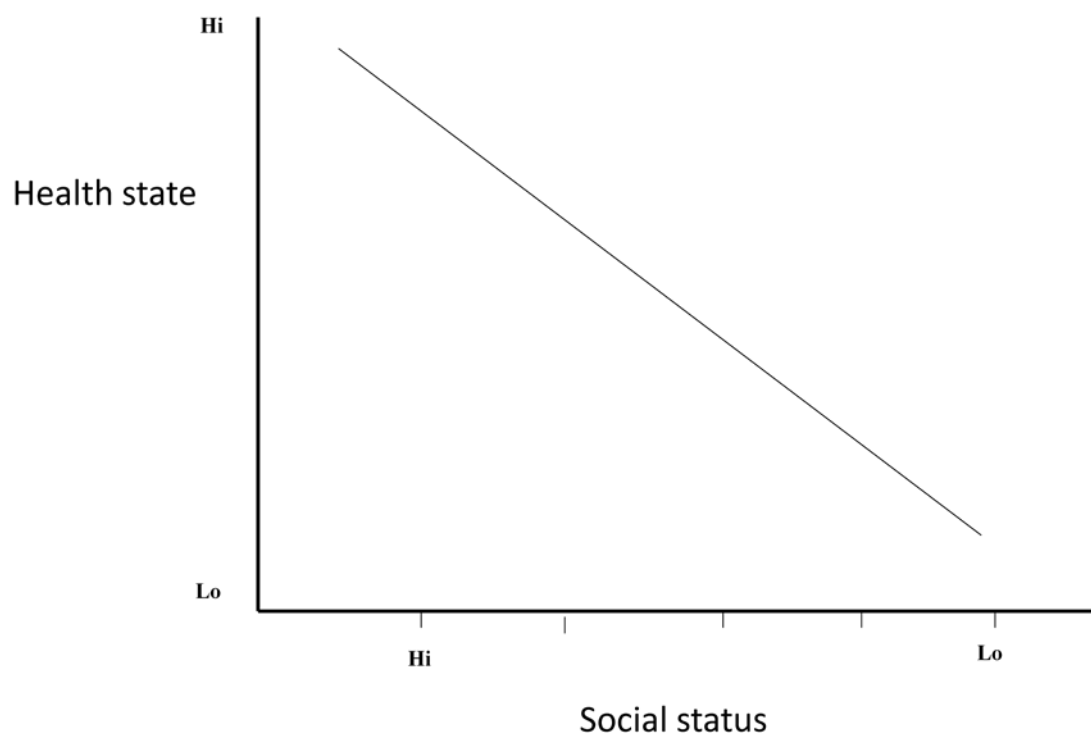
#### **Patterning**

The data reveal that health inequities are systematic or patterned. The patterning reflects various dimensions of social difference in populations -

socio economic group, gender, ethnicity, geography, age, disability and sexual orientation. The patterning occurs locally, at regional level, within countries, and between countries. This social patterning is universal in human societies, but its extent and magnitude varies between different societies (Whitehead and Dahlgren, 2006).

The pattern is conventionally referred to as the social gradient in health. The gradient describes a pattern which is formed by comparing measures of mortality and morbidity with some measure of social position. Originally, the social measure was occupation or occupation of head of household. Occupation has tended to be readily available in official statistics and has been a good proxy for a range of other aspects of life chances including education, income, housing tenure and social class (Graham and Kelly 2004).

**Figure 1. The schematic health gradient**



Source Kelly 2010

The difference in health experiences between the top, middle and bottom of the socioeconomic hierarchy varies considerably between countries. For example in Nordic countries there are relatively small disparities in health

across the population compared to the UK and the USA. In middle income and rapidly developing income countries the health differences may be very great with a mix of relatively good health among the well to do and extremes of low life expectancy and high infant mortality among the very poor. The policy implications will therefore vary considerably depending on the nature of the health gradient in particular societies (Kelly et al 2007).

### **The causes of the patterns**

The second feature is that the differences are produced socially, politically or economically – they are not the products of nature or biology. The causes of these social, economic and political processes are collectively conventionally called the social determinants of health or sometimes the causes of the causes of health inequities (Kelly and Doohan, 2011).

### **Injustice**

The third characteristic of the definition is that the differences are judged to be unfair (Whitehead and Dahlgren, 2006). In other words a further principle is invoked or appealed to in the form of some notion of social justice or human rights.

The great majority of the data relating to health differences and the health gradient uses occupation, income or education as the measure of social difference. It is important to note that although there is a weight of evidence relating to these dimensions, the legislation under which NICE operates focuses on aspects of social difference for which the evidence base is much less robust (Meads et al 2012).

It is important also to note that in empirical and theoretical terms we know almost nothing about the interactive effects on health outcomes of the relationship between socio economic grouping, gender, ethnicity, sexual orientation, and that the research on these intersections or interactions is inconclusive (Meads et al, 2012; Kelly 2010).

The questions this raises for the workshop include:

- (i) To what degree are the patterns described in the literature on health inequities mirrored in clinical data sets?
- (ii) To what degree are the questions about the causes of the pattern relevant in appraisals of new technologies?
- (iii) How easy is it to operationalise questions of injustice and fairness?

### **3.3 Policy implications**

There are conventionally three different ways in which the inequities are described in relation to policy: health disadvantage, health gaps and health gradients (Graham and Kelly, 2004). Health disadvantage simply focuses on differences, acknowledging that there are differences between distinct segments of the population, or between societies. The health gaps approach focuses on the differences between the worst off and everybody else, often assuming that those who are not the worst off enjoy uniformly good health. The health gradient approach relates to the health differences across the whole spectrum of the population, acknowledging a systematically patterned gradient in health inequities.

Conceptually, narrowing health gaps means raising the health of the poorest, fastest. It requires both improving the health of the poorest and doing so at a rate which outstrips that of the wider population. It focuses attention on the fact that overall gains in health have been at the cost of persisting and widening inequalities between socioeconomic groups and areas. It facilitates target setting. It provides clear criteria for monitoring and evaluation. An effective policy is one which achieves both an absolute and a relative improvement in the health of the poorest groups (or in their social conditions and in the prevalence of risk factors).

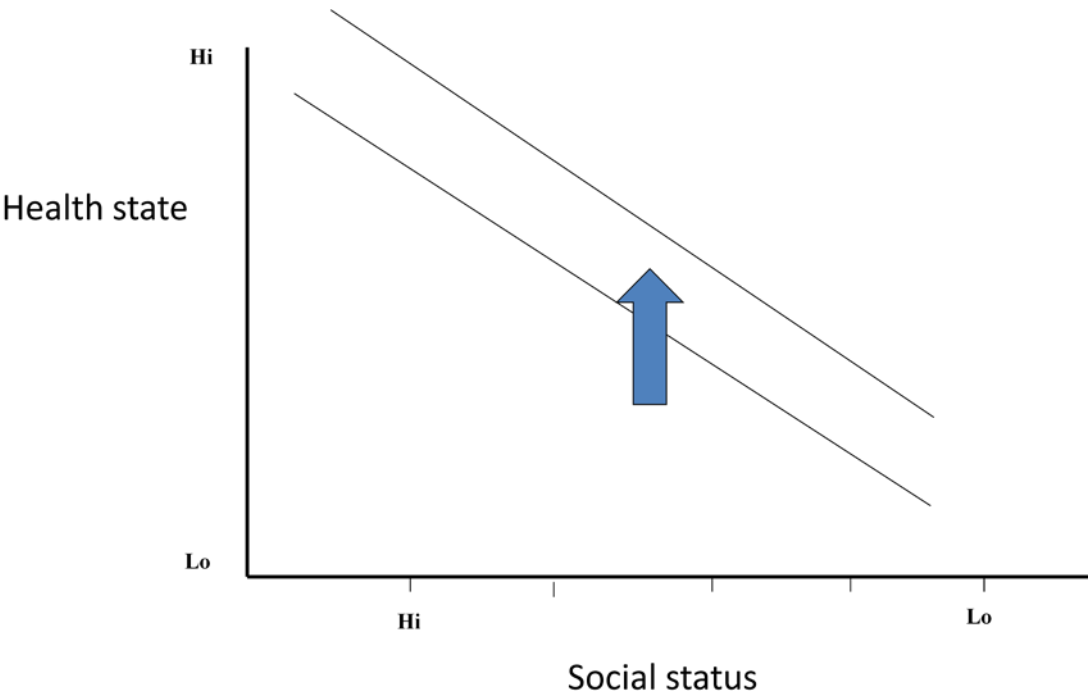
However, focusing on health gaps can limit the policy vision because it shifts attention away from a whole population focus. Some may object that if we single out some groups as 'more deserving' because they were wronged, then we are abandoning the principle that in medical contexts we ought to focus on need.



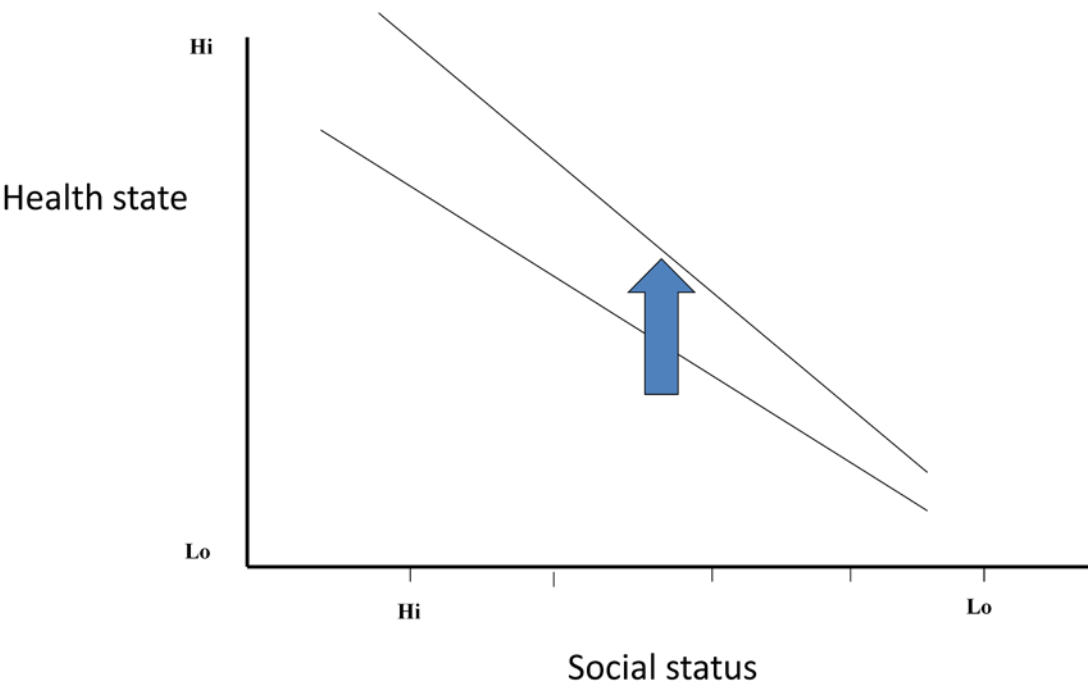
This is why the health gradient is also important. The penalties of inequities in health affect the whole social hierarchy and usually increase from the top to the bottom. Thus, if policies only address those at the bottom of the social hierarchy, inequities in health will still exist and it will also mean that the social determinants still exert their malign influence. The approach to be adopted should involve a consideration of the whole gradient in health inequities rather than only focusing on the health of the most disadvantaged. The significant caveat is that where the health gap is both large and the population numbers in the extreme circumstances are high, a process of prioritizing action by beginning with the most disadvantaged would be the immediate concern.

This approach is in line with international health policy. The founding principle of the WHO was that the enjoyment of the highest attainable standard of health is a fundamental human right, and should be within reach of all 'without distinction for race, religion, political belief, economic or social condition' (WHO, 1948). As this implies, the standards of health enjoyed by the best-off should be attainable by all. The principle is that the effects of policies to tackle health inequities must therefore extend beyond those in the poorest circumstances and the poorest health. Assuming that health and living standards for those at the top of the socioeconomic hierarchy continue to improve, an effective policy is one that meets two criteria. It is associated with (a) improvements in health (or a positive change in its underlying determinants) for all socioeconomic groups up to the highest, and (b) a rate of improvement which increases at each step down the socioeconomic ladder. In other words, a differential rate of improvement is required: greatest for the poorest groups, with the rate of gain progressively decreasing for higher socioeconomic groups. It locates the causes of health inequity, not in the disadvantaged circumstances and health-damaging behaviours of the poorest groups, but in the systematic differences in life chances, living standards and lifestyles associated with people's unequal positions in the socioeconomic hierarchy (Graham and Kelly, 2004).

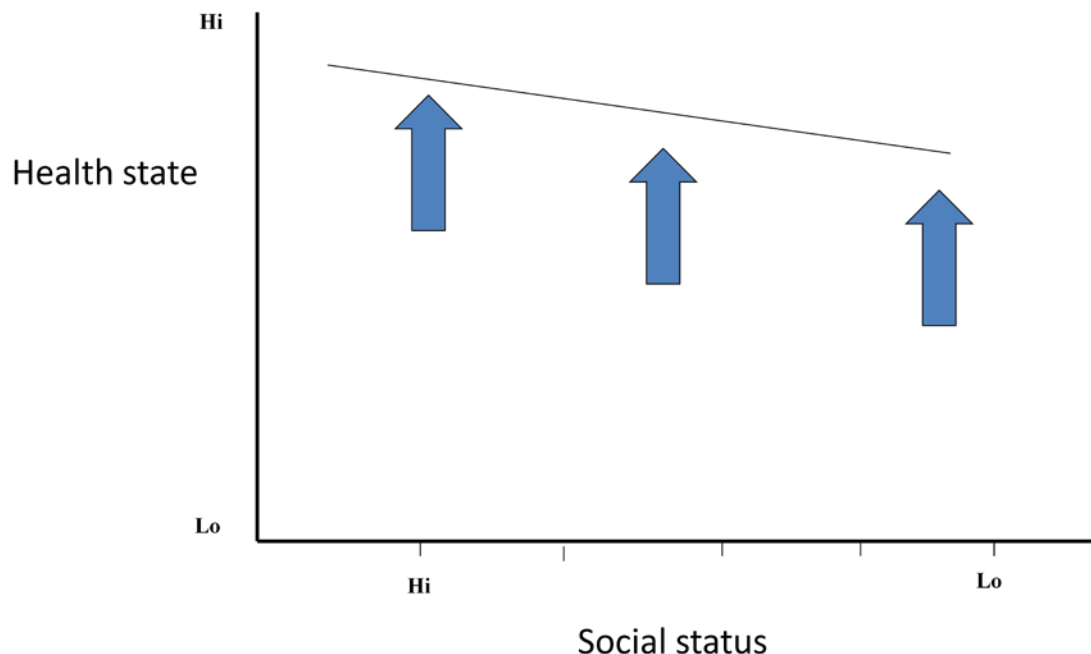
**Figure 2. The health gradient showing uniform improvement**



**Figure 3 .The health gradient showing relative health inequalities getting worse**



**Figure 4. Shifting the health gradient through universal and targeted action**



A number of questions suggest themselves here.

- (i) Do we have sufficient knowledge of differential effectiveness across social groupings to be able to manipulate interventions in such a way that they would have an impact on the gradient?
- (ii) What is the underlying purpose of the legislation in terms of gaps, gradients and equity, and to what degree should our attempt to work with the legislation have coherence in terms of policy goals?

Finally we need to note that in the public health while an enormous amount is known about the descriptions of inequalities especially in respect of class and income, the literature says almost nothing in practical terms about what ought to be done by policy makers or practitioners to remedy the situation. There are high level solutions which describe income equalization and greater public expenditure for example, but the evidence to support such approaches is at best equivocal, and in any event this is a domain where NICE has no responsibilities. So in effect what we have here is a very old problem philosophically speaking between our ability to describe the world as it is – empirical fact, and the vision of the world as we might like it to be – value. And

in the next section the problems of values as they impinge on these matters is discussed.

### **3.4 Some important philosophical and value underpinnings**

The explicit value which is evident in much of the writing on equity, as we have already noted, is that health differences that exist at population level within and between societies are unfair and unjust. This is not a scientifically derived principle; it is a value position which asserts the rights to good health of the population at large. It stands in contrast particularly to the value position that argues that differences in health are a consequence (albeit an unfortunate consequence) of the beneficial effects of the maximization of individual utility in a relatively unfettered market. It is important to note that individual and collective utilities may be at odds with respect to the rights to health (Macintyre, 1984).

There is an important literature which explores the issue. Anderson (1999) for example alerts us to the fact that , WHO's efforts notwithstanding, (i) the concept of equality means a number of different things depending on the underlying political value position and the epistemological assumptions of the theory (e.g. utilitarianism or socialism); (ii) that it is an entirely rationalist concept – it is not empirically grounded; (iii) that for the most part many writers on health inequity do not explore the underpinning value positions and assert instead that things are unjust and unfair because they could be changed; (iv) that most writings on health inequalities take as their starting point the *a priori* rationalist and political position that there is something morally wrong about health inequalities; (v) that the empirical data on health inequalities is aggregated individual data and fails to explore the relational elements of inequity. i.e. that inequity reflects power, coercion and force between groups in the social world as they compete for scarce resources (vi) that the compassionate dimension is important - the unnecessary suffering and death that the inequalities involve is surely the most important reason for dealing with the question, along with the associated waste and cost to the exchequer; (viii) that most of the literature fails to address the question of causation adequately.

Pogge (2003) draws our attention to the fact that the notion of what is just or unjust is not a given, but rather has an array of different meanings. This is because justice is a relational concept, i.e. is about relations between people and is therefore a social construct arising in social interaction and judgements about it are made morally or metaphysically. Science cannot provide answers or solutions.

The question which this prompts is:

- (i) Does the NICE social value judgements paper deal with these thorny problems?

### ***3.5 Individual differences versus patterning***

In much of the literature and certainly in the legislation two analytic causal levels are confused - the individual and the social. (Kelly 2010). This has some potentially important implications for the approach which might be taken in Technology Appraisals.

It is relatively straightforward to understand the causal pathway at the level of the individual. Pathology occurs in the human body, in an individual's cells and systems. The individual feels pain and suffers and the consequences of such morbidity are familiar to everyone. Medicine provides detailed explanations of the origins of such biological events in the individual. And also in many cases provides an ameliorative or curative therapy based on an understanding of the causal pathway. The origins of the pathology may be proximal, such as chance exposure to a virus or bacteria. Sometimes the originating cause is more distal in some aspect of environmental or occupational exposure to hazards like radiation or asbestos. But even in these cases of distal origins, the explanatory pathway is clear and operates at the level of the individual. This by and large is the territory of clinical medicine.

However, there is another equally important pathway that operates at the level of the social or population. And it is the outcomes of these pathways which is the focus of political and value concerns about equity.

There are clear patterns of population health as we noted above. One way of thinking about the patterns is to assume that they represent the aggregation of individual events. So the differences in mortality and morbidity at population level are simply the summation of lots of different individual disease episodes. And of course so it is. But the patterns can also be conceptualized as an analytic reality of their own. The fact is that the patterns themselves repeat themselves and reproduce generation after generation. The pattern has a quality of systemness or structure which exists above and beyond the individual events.

Two ideas illustrate this point. First, in the mid-19th century in Britain the principal causes of death were infectious disease. In the early 21st century the principal causes are diseases associated with smoking, diet, alcohol misuse and lack of exercise. Although the biological mechanism involved in the pathology then and now are quite different, the associated diseases still kill more of the relatively disadvantaged prematurely than those from more privileged backgrounds, just as was the case in the 19th century. In other words, quite different biological processes produce startlingly similar patterns.

Second, at geographical level the data also have quite remarkable permanent patterning. In 1862, William Gairdner, the first medical officer of health in Glasgow, in his treatise on air, water and cholera, drew up tables to show where the highest rates of infant and premature mortality were to be found. His list shows an eerily familiar overlap with contemporary albeit more finely-grained data. There is not an exact match but somewhere like Tower Hamlets in the East End of London was an unhealthy place in 1862 and it is today. The population has changed considerably in that time by national and ethnic origin, but the pattern of health inequality is reproduced (Kelly, 2010).

So an explanation is needed both of the individual disease outcomes *and* the patterns. The two causal pathways overlap, certainly, and the factors involved interact with each other, but there are two different things to be explained. The 19th-century pioneers in public health understood this at least intuitively. One can certainly draw the impression reading Gairdner's work or that of Duncan, the first medical officer of health in Liverpool that they tried to understand

social level causes as they described the social conditions of their cities. The great sanitation schemes of Bazelgette in London and similar efforts in continental Europe attest to an understanding of the possibility of intervening at population level and influencing the social level very effectively. Indeed, to some extent the major advances in the health of the public of the early period of public health were mostly attributable to the impact of these population level inputs.

The key point is this. Action to deal with patterns of health inequities will in the end require actions which operate at population level in various ways from legislation to nudging, from education to screening. Moreover the broader patterns of inequalities in society themselves provide for much of the explanations of differences seen in population patterns of health. By and large medical interventions operate at the individual level and while individual interventions will clearly benefit the individuals concerned it does not follow that this will have an impact at social level (Capewell and Graham, 2010). The underlying problem with the legislation as framed is that the duties it imposes operate on individuals, but do not operate in terms of the broader social structures.

## 4 References

Anderson, E.S.(1999) What is the point of equality? *Ethics*; 109: 287-337.

Capewell S and Graham H (2010) Will Cardiovascular Disease Prevention Widen Health Inequalities? *PLoS Med* 7(8): e1000320.  
doi:10.1371/journal.pmed.1000320

Graham H, Kelly MP. *Health inequalities: concepts, frameworks and policy*. London: Health Development Agency; 2004.  
<http://www.nice.org.uk/page.aspx?o=502453>

Kelly, M.P. (2010) The axes of social differentiation and the evidence base on health equity. *Journal of the Royal Society of Medicine*, 103: 266-72

Kelly, M.P., Morgan, A., Bonnefoy, et al. (2007) *The social determinants of health: Developing an evidence base for political action*, Final Report to the World Health Organization Commission on the Social Determinants of Health, from Measurement and Evidence Knowledge Network, The hub coordinating the Measurement and Evidence Knowledge Network is run by: Universidad

del Desarrollo, Chile, and National Institute for Health and Clinical Excellence, United Kingdom  
[http://www.who.int/social\\_determinants/resources/mekn\\_report\\_10oct07.pdf](http://www.who.int/social_determinants/resources/mekn_report_10oct07.pdf)

Kelly, M.P. and Doohan, E. (2012) The Social Determinants of Health, in, Merson, M.H., Black, R.E., Mills, A.J. (eds) *Global Health: Diseases, Programs, Systems and Policies*, 3<sup>rd</sup> edition, Burlington, MA: Jones and Bartlett. pp 75-113.

Macintyre, A. (1984) *After Virtue: A Study in Moral Theory*, Notre Dame, Indiana: University of Notre Dame Press.

Meads, C., Carmona, C., Kelly, M.P. (2012) Lesbian, gay and bisexual people's health in the UK : A theoretical critique and systematic review. *Diversity in Health Care*, in press

Pogge, T.W. (2003) Relational conceptions of justice: responsibilities for health outcomes, in Anand, S., Fabienne, P., Sen, A. (eds) *Health, Ethics and Equity*, Oxford: Clarendon.

Solar O, Irwin A. (2007). Towards a conceptual framework for analysis and action on the social determinants of health. WHO / Commission on Social Determinants of Health: Geneva.

Solar O, and Irwin A. (2010) A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2 (Policy and Practice). WHO: Geneva.

Whitehead, M. (1992) Perspectives in health inequity, *International Journal of Health Services*; 22: 429-45.

Whitehead, M. (2007) A typology of actions to tackle social inequalities in health, *Journal of Epidemiology and Community Health*; 61: 473-478.

Whitehead, M and Dahlgren, G. (2006) Levelling Up (Part 1) A Discussion Paper on Concepts and Principles for Tackling Inequities in Health, Copenhagen: WHO.

WHO (1948) Constitution of the World Health Organisation, London: WHO.

WHO (2008) Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health, Geneva: WHO.



## **5 Author/s**

Prepared by Professor Mike Kelly PhD FFPH Hon FRCP

Director, Centre for Public Health Excellence

National Institute for Health and Clinical Excellence

January 2012